UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,254	12/10/2001	Randolph E. Crutchfield	5038-142	4414

7590 04/01/2005

MARGER JOHNSON & McCOLLOM, P.C.
1030 S.W. Morrison Street
Portland, OR 97205

EXAMINER	
HENRY, MATTHEW ALLAN	

ART UNIT	PAPER NUMBER
2116	

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/016,254	CRUTCHFIELD ET AL.	
	Examiner	Art Unit	
	Matthew A. Henry	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *23,24,28 and 29* is/are allowed.

6)☒ Claim(s) *1-22 and 25-27* is/are rejected.

7)☒ Claim(s) *4* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *03 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 4 is objected to because of the following informalities:

The claim cites 100 mA as a power threshold, but this is a current threshold.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting an essential element, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted element is: either a voltage value or a resistance value.

In the Office Action dated 10/26/04, Claim 4 was objected to because it states 100 mA is a power threshold when the units of measurement clearly show this to be a current. The applicant responds saying, "For a given operating voltage, current is related to power" (Page 10, Section "Claim Objections," Line 2). The Examiner agrees, noting that power may be calculated from the equations $p=v*i$ or $p=i^2*R$, for example. It should be clear from these equations that given a 100 mA current value, varying the voltage or resistance could produce any value of power. This results in an indefinite threshold.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 4 is rejected under U.S.C. 103(a) as being unpatentable over Gilbert (US 2001/0003205).

Concerning Claim 4, Gilbert discloses:

a system for sharing power in a computer peripheral device using the example of a high power USB device. Gilbert teaches a system wherein power is supplied from a secondary power source when the power demanded by the system exceeds a certain power level supplied from a first power source. The system, which operates at 5 volts and a maximum of 2.5 watts of power, would produce a current threshold of 500 mA, thus Gilbert does not expressly disclose a threshold of 100 mA. However, the system taught by Gilbert is not limited to systems wherein the peripheral devices are high power USB devices.

The teachings to Gilbert equally apply to peripheral devices that run at other current thresholds. Therefore, it would have been obvious to a person of ordinary skill in the art to apply the teachings of Gilbert to other devices whose current threshold is 100 mA for the benefit of supplying additional power to the device when necessary.

6. Claims 1-3, 9-15, 18-22 and 25-27 are rejected under U.S.C. 103(a) as being unpatentable over Gilbert (US 2001/0003205) in view of Flannery (5,799,196).

Concerning Claim 1, Gilbert discloses:

A system for sharing power in a computer peripheral device (Paragraph 7, Lines 11-14), comprising:

a local power supply (Figure 1, Item 48; Paragraph 16, Line 6);

a power supply interface (Figure 1, Item 42; Paragraph 15, Lines 12-13) adapted to receive an external bus power source (Figure 1, Items 421 and 422; Paragraph 16, Lines 1-2) and

a power sharing circuit coupled to the local power supply and to the power supply interface (Figure 1, Item 46; Paragraph 16, Lines 9-11), the power sharing circuit structured to simultaneously provide power to the peripheral device (Figure 1, Items 461 and 462; Paragraph 16, Lines 15-17) from both the local power supply and from the external bus power source (Paragraph 19, Lines 9-11).

Gilbert does not disclose a local power supply comprising circuitry coupled to an external supply other than the external bus power source.

Flannery teaches:

A USB device (Figures 1A and 1B, Items 104A and 104B, respectively) having circuitry (Figures 1A and 1B, Item 106) connected to a remote power supply unit (Figures 1A and 1B, Item 108) wherein the power supply unit "can be batteries, AC wall current, or other well-known power sources" (Column 6, Lines 9-11).

As is well known in the art, AC wall current may provide a limitless amount of power to a device whereas batteries can produce a finite amount of power and must be replaced to keep the device functional.

Accordingly, it would have been obvious to a person of ordinary skill in the art at the time of invention to modify the power source used in the power sharing device disclosed by Gilbert to be an external power source as taught by Flannery because it would provide a limitless supply of power to a USB device.

Concerning Claim 2, Gilbert further discloses:

when an amount of power required by the peripheral device is below a power threshold, the power sharing circuit is structured to provide power to the peripheral device from either the local power supply or from the external bus power supply (Paragraph 23, Lines 7-14; the voltage regulator runs the peripheral using only external bus power so long as there is some bus current not being drawn by the primary-function module; this condition means that the maximum threshold here is 500mA, which is the maximum available current from the bus).

Concerning Claim 3, Gilbert further discloses:

the power sharing circuit is structured to provide power to the peripheral device from the external bus power supply when the amount of power required by the peripheral device is below the power threshold (Paragraph 23, Lines 7-14).

Concerning Claim 9, Gilbert further discloses:

the external bus power source is a computer bus (Figure 1, Item 30; Paragraph 15, Lines 6-9).

Concerning Claim 10, Gilbert further discloses:

the computer bus is a Universal Serial Bus (Figure 1, Item 30; Paragraph 15, Lines 6-9).

Concerning Claim 11, Flannery teaches:

A USB device (Figures 1A and 1B, Items 104A and 104B, respectively) with a power supply (Figures 1A and 1B, Item 108) that may be an AC wall current (Column 6, Line 10).

While Flannery does not explicitly teach of a transformer, the existence of a transformer is inherent to a USB device with an AC power supply *must* transform the voltage source into DC.

Concerning Claim 12, Gilbert discloses:

A peripheral device (Figure 1, Item 40; Paragraph 15, Line 13) comprising:

a load circuit for consuming power in the peripheral device (Figure 1, Item 49; Paragraph 17, Lines 1-3);

a local power source for providing power in the peripheral device (Figure 1, Item 48; Paragraph 16, Line 6);

a power source interface (Figure 1, Item 42; Paragraph 15, Lines 12-13) adapted to receive an external bus power source (Figure 1, Items 421 and 422; Paragraph 16, Lines 1-2); and

a power sharing circuit coupled to the local power supply and to the power supply interface (Figure 1, Item 46; Paragraph 16, Lines 9-11), the power sharing circuit

structured to provide power to the load circuit (Figure 1, Items 461 and 462; Paragraph 16, Lines 15-17) from both the local power source and from the external bus power source at the same time (Paragraph 19, Lines 9-11).

Gilbert does not disclose a local power source for providing power in the peripheral device from an external supply other than the external bus power source.

Flannery teaches:

A local power source (Figures 1A and 1B, Item 108) for providing power in the peripheral device (Figures 1A and 1B, Items 104A and 104B, respectively) from an external supply other than the external bus power source (Column 6, Lines 9-11).

As is well known in the art, AC wall current may provide a limitless amount of power to a device whereas batteries can produce a finite amount of power and must be replaced to keep the device functional.

Accordingly, it would have been obvious to a person of ordinary skill in the art at the time of invention to modify the power source used in the power sharing device disclosed by Gilbert to be an external power source as taught by Flannery because it would provide a limitless supply of power to a USB device.

Concerning Claim 13, Gilbert further discloses:

when an amount of power required by the load circuit is below a power threshold, the power sharing circuit is structured to provide power to the peripheral device from either the local power source or from the external bus power source (Paragraph 23, Lines 7-14; the voltage regulator runs the peripheral using only external bus power so long as there is some bus current not being drawn by the primary-function module; this condition

means that the maximum threshold here is 500mA, which is the maximum available current from the bus).

Concerning Claim 14, Gilbert further discloses:

The device according to claim 12, wherein when an amount of power required by the load circuit is below a power threshold, the power sharing circuit is structured to provide power to the peripheral device from the external bus power source (Paragraph 23, Lines 7-14).

Concerning Claim 15, Gilbert further discloses:

when an amount of power required by the load circuit is above a first power threshold (Paragraph 18, Lines 3-5; the first power threshold is zero power), but below a second power threshold (Paragraph 23, Lines 7-14; the second power threshold is the maximum threshold, 500 mA), the power sharing circuit is structured to provide power to the peripheral device from either the external bus power supply, or from a combination of the external power bus supply and the local power supply (Paragraph 23, Lines 7-14).

Concerning Claim 18, Gilbert further discloses:

the external bus power source is a computer bus (Figure 1, Item 30; Paragraph 15, Lines 6-9) and is coupled to the power sharing circuit via a bus cable (Figure 1, Item 32; Paragraph 15, Lines 2-4).

Concerning Claim 19, Gilbert further discloses:

the computer bus is a Universal Serial Bus (Figure 1, Item 30; Paragraph 15, Lines 6-9).

Concerning Claim 20, Gilbert further discloses:

A method for providing power to a load circuit in a computer peripheral device, comprising:

providing from a bus power source external to the peripheral device power requirements of the load circuit up to a threshold amount of power (Paragraph 23, Lines 7-14; the threshold amount is 2.5 watts, the maximum amount transmittable over a USB connection); and

providing from a combination of the external bus power source and from an external power source internal to the peripheral device the power requirements of the load circuit if the power requirements of the load circuit exceed the threshold amount (Paragraph 23, Lines 7-14; when the load demands greater than 2.5 watts, the battery supplies additional power).

Gilbert does not disclose an external power source other than the external bus power source.

Flannery teaches:

an external power source other than the external bus power source (Figures 1A and 1B, Item 108; Column 6, Lines 9-11).

As is well known in the art, AC wall current may provide a limitless amount of power to a device whereas batteries can produce a finite amount of power and must be replaced to keep the device functional.

Accordingly, it would have been obvious to a person of ordinary skill in the art at the time of invention to modify the power source used in the power sharing device disclosed by Gilbert to be an external power source as taught by Flannery because it would provide a limitless supply of power to a USB device.

Concerning Claim 21, Gilbert further discloses:

providing power requirements from the external bus power source comprises providing power from a computer bus (Figure 1, Item 30; Paragraph 15, Lines 6-9).

Concerning Claim 22, Gilbert further discloses:

providing power requirements from a computer bus comprises providing power from a Universal Serial Bus (Figure 1, Item 30; Paragraph 15, Lines 6-9).

Concerning Claim 25, Gilbert discloses:

A method for providing power to a load circuit in a computer peripheral device, comprising:

providing an initial amount of power to the load circuit from an external bus source (Paragraph 23, Lines 11-13);

allowing the load circuit to increase the amount of power drawn from the external bus source (Paragraph 23, Lines 7-14; the device adds additional power sources when necessary, thus suggesting the load may need varying amounts of power);

monitoring the amount of power drawn from the external bus source (Paragraph 23, Lines 7-10); and

adding power from a local power source to the amount of power drawn from the external source once the amount of power drawn from the external source exceeds a threshold level (Paragraph 25, Lines 10-14).

Gilbert does not disclose a local external power source.

Flannery teaches:

A local external power source (Figures 1A and 1B, Item 108; Column 6, Lines 9-11).

As is well known in the art, AC wall current may provide a limitless amount of power to a device whereas batteries can produce a finite amount of power and must be replaced to keep the device functional.

Accordingly, it would have been obvious to a person of ordinary skill in the art at the time of invention to modify the power source used in the power sharing device disclosed by Gilbert to be an external power source as taught by Flannery because it would provide a limitless supply of power to a USB device.

Concerning Claim 26, Gilbert discloses:

providing power from an external bus source comprises providing power from a computer bus (Figure 1, Item 30; Paragraph 15, Lines 6-9).

Concerning Claim 27, Gilbert discloses:

providing power from a computer bus comprises coupling the peripheral device to a Universal Serial Bus (Figure 1, Item 30; Paragraph 15, Lines 6-9).

7. Claims 5-8 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert (US 2001/0003205) and Flannery (5,799,196) in view of *Zener Regulators.*

Concerning Claim 5, Gilbert discloses:

A system for sharing power in a computer peripheral device (Paragraph 7, Lines 11-14), comprising:

a local power supply (Figure 1, Item 48; Paragraph 16, Line 6);

a power supply interface (Figure 1, Item 42; Paragraph 15, Lines 12-13) adapted to receive an external bus power source (Figure 1, Items 421 and 422; Paragraph 16, Lines 1-2) and

a power sharing circuit coupled to the local power supply and to the power supply interface (Figure 1, Item 46; Paragraph 16, Lines 9-11), the power sharing circuit structured to simultaneously provide power to the peripheral device (Figure 1, Items 461 and 462; Paragraph 16, Lines 15-17) from both the local power supply and from the external bus power source (Paragraph 19, Lines 9-11).

Wherein the power sharing circuit comprises:

a voltage regulator coupled in series between the power supply interface and a load (Figure 1, Item 46; Paragraph 16, Lines 9-11).

Gilbert, however, does not provide specific details regarding the implementation of this voltage regulator to include a resistive device between the power supply interface and the load as well as a zener diode attached to the resistive device.

When one of ordinary skill in the art is confronted with a disclosure of a standard device and the specifics of the device are not detailed, he would look to conventional

texts such as *Zener Regulators* to determine the properties of the device. A Zener regulator has the ability to hold a voltage constant regardless of the current (*Zener* Regulators, Page 1). Zener *Regulators* teaches that voltage regulators can be created by placing a resistive device in series between a power supply and a load as well as a zener diode in parallel to the resistive device.

Accordingly, it would have been obvious to a person of ordinary skill in the art to choose to implement the voltage regulator taught by Gilbert with a resistor and zener diode as demonstrated by *Zener Regulators* because it can hold voltage constant regardless of current, thus arriving at the device of Claim 5.

Concerning Claim 6, Gilbert further discloses:

a suspend circuit coupled between the external power source and the load (Figure 1, Item 44; Paragraph 16 and 18, Lines 7-9 and 3-5), the suspend circuit structured to disconnect the load from the external power source responsive to a signal from the power source (Paragraph 18, Lines 6-9).

Concerning Claim 7, Gilbert discloses:

A system for sharing power in a computer peripheral device (Paragraph 7, Lines 11-14), comprising:

a local power supply (Figure 1, Item 48; Paragraph 16, Line 6);

a power supply interface (Figure 1, Item 42; Paragraph 15, Lines 12-13) adapted to receive an external bus power source (Figure 1, Items 421 and 422; Paragraph 16, Lines 1-2) and

a power sharing circuit coupled to the local power supply and to the power supply interface (Figure 1, Item 46; Paragraph 16, Lines 9-11), the power sharing circuit structured to simultaneously provide power to the peripheral device (Figure 1, Items 461 and 462; Paragraph 16, Lines 15-17) from both the local power supply and from the external bus power source (Paragraph 19, Lines 9-11).

Wherein the power sharing circuit comprises:

a voltage regulator coupled in series between the power supply interface and a load (Figure 1, Item 46; Paragraph 16, Lines 9-11).

Gilbert does not, however, mention a resistive device coupled in series with the voltage regulator.

The voltage regulator described in the claim can be implemented using a zener diode. The applicant states in the specification that the resistive device mentioned in this claim has a "function similar to the resistor 82 of FIG. 3 in that . . . the resistor 92 causes the voltage to drop on the power supplied by the computer bus" (Page 7, Lines 25-27). The purpose of the voltage regulator in the claim, therefore, need only provide the same benefits of a zener diode described in *Zener Regulators* to provide a voltage regulating circuit.

As mentioned in the Claim 5 rejection above, it is obvious to a person of ordinary skill in the art to use a zener regulator described by *Zener Regulators* as the voltage regulator taught by Gilbert.

Concerning Claim 8, Gilbert further discloses:

a suspend circuit coupled between the external power source and the load (Figure 1, Item 44; Paragraph 16 and 18, Lines 7-9 and 3-5), the suspend circuit structured to disconnect the load from the external power source responsive to a signal from the power source (Paragraph 18, Lines 6-9).

Concerning Claim 16, Gilbert discloses:

A peripheral device (Figure 1, Item 40; Paragraph 15, Line 13) comprising:

a load circuit for consuming power in the peripheral device (Figure 1, Item 49; Paragraph 17, Lines 1-3);

a local power source for providing power in the peripheral device (Figure 1, Item 48; Paragraph 16, Line 6);

a power source interface (Figure 1, Item 42; Paragraph 15, Lines 12-13) adapted to receive an external bus power source (Figure 1, Items 421 and 422; Paragraph 16, Lines 1-2); and

a power sharing circuit coupled to the local power supply and to the power supply interface (Figure 1, Item 46; Paragraph 16, Lines 9-11), the power sharing circuit structured to provide power to the load circuit (Figure 1, Items 461 and 462; Paragraph 16, Lines 15-17) from both the local power source and from the external bus power source at the same time (Paragraph 19, Lines 9-11).

Wherein the power sharing circuit comprises:

a voltage regulator coupled in series between the power supply interface and the load circuit (Figure 1, Item 46; Paragraph 16, Lines 9-11).

Gilbert, however, does not provide specific details regarding the implementation of this voltage regulator to include a resistive device in series between the power supply interface and the load circuit as well as a zener diode attached to the resistive device to server as a shunt regulator.

When one of ordinary skill in the art is confronted with a disclosure of a standard device and the specifics of the device are not detailed, he would look to conventional texts such as *Zener Regulators* to determine the properties of the device. A Zener regulator has the ability to hold a voltage constant regardless of the current (*Zener* Regulators, Page 1). Zener *Regulators* teaches that voltage regulators can be created by placing a resistive device in series between a power supply and a load as well as a zener diode in parallel to the resistive device.

Accordingly, it would have been obvious to a person of ordinary skill in the art to choose to implement the voltage regulator taught by Gilbert with a resistor and zener diode as demonstrated by *Zener Regulators* because it can hold voltage constant regardless of current, thus arriving at the device of Claim 5.

Concerning Claim 17, Gilbert discloses:

A peripheral device (Figure 1, Item 40; Paragraph 15, Line 13) comprising:

a load circuit for consuming power in the peripheral device (Figure 1, Item 49; Paragraph 17, Lines 1-3);

a local power source for providing power in the peripheral device (Figure 1, Item 48; Paragraph 16, Line 6);

a power source interface (Figure 1, Item 42; Paragraph 15, Lines 12-13) adapted to receive an external bus power source (Figure 1, Items 421 and 422; Paragraph 16, Lines 1-2); and

a power sharing circuit coupled to the local power supply and to the power supply interface (Figure 1, Item 46; Paragraph 16, Lines 9-11), the power sharing circuit structured to provide power to the load circuit (Figure 1, Items 461 and 462; Paragraph 16, Lines 15-17) from both the local power source and from the external bus power source at the same time (Paragraph 19, Lines 9-11).

Wherein the power sharing circuit comprises:

a voltage regulator coupled in series between the power supply interface and the load

circuit (Figure 1, Item 46; Paragraph 16, Lines 9-11).

a resistive device coupled in series between the voltage regulator and the load circuit.

Gilbert does not, however, mention a resistive device coupled in series with the voltage regulator.

The voltage regulator described in the claim can be implemented using a zener diode. The applicant states in the specification that the resistive device mentioned in this claim has a "function similar to the resistor 82 of FIG. 3 in that . . . the resistor 92 causes the voltage to drop on the power supplied by the computer bus" (Page 7, Lines 25-27). The purpose of the voltage regulator in the claim, therefore, need only provide the same benefits of a zener diode described in *Zener Regulators* to provide a voltage regulating circuit.

As mentioned in the Claim 5 rejection above, it is obvious to a person of ordinary skill in the art to use a zener regulator described by *Zener Regulators* as the voltage regulator taught by Gilbert.

Allowable Subject Matter

8. Claims 23, 24, 28 and 29 are allowed.

9. The following is an examiner's statement of reasons for allowance:

Concerning Claim 23, Gilbert discloses:

requesting the external power source to provide all the power requirements of the load circuit *up to* the threshold amount.

Gilbert does not disclose:

requesting the external power source to provide all the power requirements of the load circuit above the threshold amount.

The prior art neither discloses nor provides motivation for using an external power source to provide additional power when the power demanded exceeds a certain threshold. Therefore, at the time of the invention, it would not have been obvious to a person of ordinary skill in the art to modify Gilbert to offer additional power beyond a power threshold.

Concerning Claim 28, Gilbert discloses:

requesting the external source to provide all the power used by the load circuit *until* the amount of power drawn from the external source exceeds the threshold level.

Gilbert does not disclose:

requesting the external source to provide all the power used by the load circuit if the amount of power drawn from the external source exceeds the threshold level.

The prior art neither discloses nor provides motivation for using an external power source to provide additional power when the power demanded exceeds a certain threshold. Therefore, at the time of the invention, it would not have been obvious to a person of ordinary skill in the art to modify Gilbert to offer additional power beyond a power threshold.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

10. Applicant's arguments with respect to claims 1-3, 9-15, 18-22 and 25-27 have been considered but are moot in view of the new ground(s) of rejection.

11. Applicant states, "the Examiner is arguing that it would have been obvious to try to use any type of voltage regulator in the power sharing circuit" (Pages 12). Applicant further interprets the Examiner's use of 'obvious to try' to consist of varying all parameters or trying each of numerous different possible choices where the prior art gives no indication of which parameters or choices are likely to be successful (Page 12). Examiner feels the use of a zener regulator does not constitute varying all parameters or using each of a numerous different possible choices because it is a standard method of

voltage regulation. Furthermore, *Zener Regulators* provides teachings as shown above in the rejection of Claim 5 that the use of a zener regulator is a good choice for a voltage regulator as its components enables voltage regulation to holds regardless of the current level.

12. Applicant states *Zener Regulators* does not have a publication date. The date cited in the first office action, 2/21/2001, was obtained using the Wayback Machine (http://www.archive.org). Additionally, the website itself has a date attached to it; according to the source code of the webpage, where authoring and date information concerning a website are typically kept, the webpage was copyrighted in 2000.

13. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In light of the arguments made in the Claim 5 rejection above and the evidence demonstrating that the use of a zener regulator as a voltage regulator was known at the time of the invention, the disclosure of Gilbert combined with the teachings of Flannery and *Zener Regulators* alone is sufficient to teach the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew A. Henry whose telephone number is (571) 272-3845. The examiner can normally be reached on Monday - Friday (8:00 am -5:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MAH